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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/903,188	07/11/2001	Edward M. De Robertis	510015-258	1059

7590 02/16/2005

Margaret Duncan  
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EXAMINER

ROMEO, DAVID S

ART UNIT PAPER NUMBER

1647

DATE MAILED: 02/16/2005

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Please find below and/or attached an Office communication concerning this application or proceeding.

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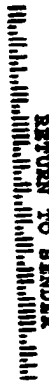
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/903,188	07/11/2001	Edward M. De Robertis	510015-258	1059

7590 05/27/2004  
Attention : Charles Berman  
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38th Floor  
2029 Century Park East  
Los Angeles, CA 90067-3024

EXAMINER

ROMEO, DAVID S

ART UNIT	PAPER NUMBER
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1647

DATE MAILED: 05/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/903,188	DE ROBERTIS ET AL	
	<b>Examiner</b>	<b>Art Unit</b>	
	David S Romeo	1647	

- The MAILING DATE of this communication appears on the cover sheet with the correspondence address -  
**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 August 2003.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 6-8, 11 and 12 is/are pending in the application.
- 4a) Of the above claim(s) 11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 6-8 and 12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 6-8, 11 and 12 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>0402</u> .  | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

The preliminary amendments filed 11/17/2003 and 07/11/2001 have been entered.

Claims 6-8, 11, 12 are pending.

5

Applicant's election of group I, claims 6-8, 12, in Paper No./the paper filed 08/22/2003 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

10

Applicant's election of the polypeptide encoded by SEQ ID NO: 10 or comprising the amino acid sequence of SEQ ID NO: 9 species in Paper No./the paper filed 12/08/2003 is acknowledged.

15

Claim 11 is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made without traverse in Paper No./the paper filed 08/22/2003.

20

Claims 6-8, 12 are being examined. Claim 12 is being examined only to the extent that it reads upon the polypeptide encoded by SEQ ID NO: 10 or comprising the amino acid sequence of SEQ ID NO: 9 species.

***Priority***

Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 120 as follows:

An application in which the benefits of an earlier application are desired must  
5 contain a specific reference to the prior application(s) in the first sentence of the specification or in an application data sheet (37 CFR 1.78(a)(2) and (a)(5)). The specific reference to any prior nonprovisional application must include the relationship (i.e., continuation, divisional, or continuation-in-part) between the applications except when the reference is to a prior application of a CPA assigned the same application number.

10 It is acknowledged that the present application contains a specific reference to the 08/874,474 prior application in the first sentence of the specification. However, the specific reference to the 08/874,474 prior nonprovisional application does not include the relationship (i.e., continuation, divisional, or continuation-in-part) between the applications. The status of nonprovisional parent application(s) (whether patented or  
15 abandoned) should also be included. If a parent application has become a patent, the expression "now Patent No. \_\_\_\_" should follow the filing date of the parent application. If a parent application has become abandoned, the expression "now abandoned" should follow the filing date of the parent application.

If a benefit claim to a provisional application is submitted without an indication  
20 that an intermediate application directly claims the benefit of the provisional application and the instant nonprovisional application is not filed within the 12 month period or the relationship between each nonprovisional application is not indicated, the Office will not recognize such benefit claim and will not include the benefit claim on the filing receipt.

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Therefore, a petition under 37 CFR 1.78(a) and the surcharge set forth in 37 CFR 1.17(t) will be required if the intermediate application and the relationship of each nonprovisional application are not indicated within the period set forth in 37 CFR 1.78(a). Even if the Office has recognized a benefit claim by entering it into the Office's database and including it on applicant's filing receipt, the benefit claim is not a proper benefit claim under 35 U.S.C. 119(e) or 35 U.S.C. 120 and 37 CFR 1.78 unless the reference is included in an ADS or in the first sentence of the specification and all other requirements are met. Accordingly, the benefit of the filing dates of the 08/874,474 nonprovisional application and the 60/020,150 provisional application is denied.

It is acknowledged that Applicants submitted a petition on 11/17/2003 to accept an unintentionally delayed claim for priority. However, that petition has been dismissed. See the paper mailed 05/21/2004.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 6-8, 12 are rejected under 35 U.S.C. 102(b) as being anticipated by De Robertis (N).

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This rejection is being made because the Office does not recognize Applicants benefit claims to the 08/874,474 nonprovisional application and the 60/020,150 provisional application, as discussed above.

De Robertis discloses a substantially pure protein characterized by a physiologically active form and comprising an amino acid sequence encoded by the DNA of SEQ ID NO: 10 (page 25, claim 6). De Robertis's SEQ ID NO: 10 is identical to the present application's SEQ ID NO: 10, as indicated below (Qy = the present application's SEQ ID NO: 10) (Db = De Robertis's SEQ ID NO: 10):

```

10  AAV14017
    ID  AAV14017 standard; cDNA; 1893 BP.
    XX
    AC  AAV14017;
    XX
    DT  09-JUL-1998 (first entry)
    XX
    DB  Human "frazzled" frzb-1 cDNA.
    XX
    NM  Growth factor; frazzled; frzb-1; Wnt3 antagonist; human;
    NN  tumour suppressor; cancer; ds.
    XX
    OS  Homo sapiens.
    XX
    FH  Key          Location/Qualifiers
    FT  CDS          61..1038
    FT              /tag= a
    FT              /product= frzb-1 protein
    XX
    PN  M09748275-A1.
    XX
    PD  24-DEC-1997.
    XX
    PF  19-JUN-1997; 97MO-US10942.
    XX
    PR  18-JUN-1997; 97US-0878474.
    PR  20-JUN-1996; 96US-0020150.
    XX
    RA  (REOC) UNIV CALIFORNIA.
    XX
    PI  Bounseester T. De Robertis SM;
    XX
    DR  MPI; 1998-062760/06.
    DR  P-PDSB; AAM41254.
    XX
    PT  New isolated growth factors - with neurotrophic, growth or
    PT  differentiation factor activity, tumour growth suppressor activity
    PT  or mesoderm differentiation activity
    XX
    PS  Claim 6; Fig 10; 48pp; English.
    XX
    CC  The present sequence encodes the human growth factor protein
    CC  "frazzled" frzb-1. frzb-1 is an antagonist of Wnt3 in vivo, and
    CC  thus is believed to find utility as a tumour suppressor gene,
    CC  since overexpressed Wnt proteins cause cancer. Frzb-1 may also be a
    CC  useful vehicle for solubilisation and therapeutic delivery of
    CC  complexed Wnt proteins.
    XX
    SQ  Sequence 1893 BP; 516 A; 438 C; 432 G; 507 T; 0 other;

60  Query Match          100.0%; Score 1893; DB 19; Length 1893;
    Best Local Similarity 100.0%; Pred. No. 0;
    Matches 1893; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

65  Qy      1 0000GAGCGGGCCCTTTTGGGCTCCACTGCGGGGCTGACGCTGCCCATCTGCCGGGATC 60
    Db      1 0000GAGCGGGCCCTTTTGGGCTCCACTGCGGGGCTGACGCTGCCCATCTGCCGGGATC 60
    Qy      61 ATGGTCTGCGGCAAGCCCGGAGGATGCTGCTGCTGCGGGGCGGGCTGCTTCCCTGGCT 120
    Db      61 ATGGTCTGCGGCAAGCCCGGAGGATGCTGCTGCTGCGGGGCGGGCTGCTTCCCTGGCT 120

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Db 61 ATGCTCTGCGCGACCCCGCGGCGGTCTGCTGCTGCGCGCGCGCTGCTGCTGCTGCTGCT 130

Qy 131 GCTCTCTGCTGCTGCTGCGCGGTGCGCGCGCGCTGCGCGCTGCTGCTGCTGCTGCTGCTGCTGCT 130

5 Db 131 GCTCTCTGCTGCTGCTGCGCGGTGCGCGCGCGCTGCGCGCTGCTGCTGCTGCTGCTGCTGCTGCT 130

Qy 161 CCCCTGTGCAATGCCCTGCCCTGGAACTGACTAAGATGCCAACCCTGCACCAAGC 240

10 Db 191 CCCCTGTGCAATGCCCTGCCCTGGAACTGACTAAGATGCCAACCCTGCACCAAGC 240

Qy 241 ACTCAGGCCAAGCCATCCTGCGCATCGAGCAATTCGAAATCTGCTGCGCAGCCACTGC 300

Db 241 ACTCAGGCCAAGCCATCCTGCGCATCGAGCAATTCGAAATCTGCTGCGCAGCCACTGC 300

15 Qy 301 AGCCCGGATCTGCTCTCTCTCTCTCTGTCGCAATGACGCGCCGATCTGCACCAATTGACTTC 360

Db 301 AGCCCGGATCTGCTCTCTCTCTCTCTGTCGCAATGACGCGCCGATCTGCACCAATTGACTTC 360

20 Qy 361 CAGCACGCGCCATCGAGCCCTGTAAATCTCTGTGTCGAGCGCGCGCGCGCGCGCGCTGTGAG 420

Db 361 CAGCACGCGCCATCGAGCCCTGTAAATCTCTGTGTCGAGCGCGCGCGCGCGCGCGCTGTGAG 420

Qy 421 CCCATATCATCTAAATGACCGCCACTGTGTGCGCGCGAGCACTGCGCTGCGAGAGCTGCCA 480

25 Db 421 CCCATATCATCTAAATGACCGCCACTGTGTGCGCGCGAGCACTGCGCTGCGAGAGCTGCCA 480

Qy 481 GTGTACGCGAGCGCGCTGTGATCTCTGCGCGAGCCATCTGTTACTGCGGACGAGCTGAT 540

Db 481 GTGTACGCGAGCGCGCTGTGATCTCTGCGCGAGCCATCTGTTACTGCGGACGAGCTGAT 540

30 Qy 541 TTTCCTATGATTTCTAGTAAAGGAACTGTAGAGCGCGCGAGCACTGAAAGCTGTAAATGT 600

Db 541 TTTCCTATGATTTCTAGTAAAGGAACTGTAGAGCGCGCGAGCACTGAAAGCTGTAAATGT 600

35 Qy 601 AAGCCTATTAGAGCTACAGCAAGAGCCTATTTCGGAGCAATTACACTATGCTATTTCG 660

Db 601 AAGCCTATTAGAGCTACAGCAAGAGCCTATTTCGGAGCAATTACACTATGCTATTTCG 660

40 Qy 661 GCTAAAGTTAAAGAGTAAAGACTAAGTCCATGATGTGACTGCGATGTGAGAGTGAAG 720

Db 661 GCTAAAGTTAAAGAGTAAAGACTAAGTCCATGATGTGACTGCGATGTGAGAGTGAAG 720

Qy 721 GAGATTCTAAATGCTCTCTGCTGTAAAGCTTCCAGCGCGAGCTGTGAACTCTATACGAGC 780

45 Db 721 GAGATTCTAAATGCTCTCTGCTGTAAAGCTTCCAGCGCGAGCTGTGAACTCTATACGAGC 780

Qy 781 TCTGCTGCTCTGCGCTGCCATTAATGTTAAAGGAAATATATCATCATGCGCTATGAA 840

50 Db 781 TCTGCTGCTCTGCGCTGCCATTAATGTTAAAGGAAATATATCATCATGCGCTATGAA 840

Qy 841 GATGAGGAGCTTCCGATTAATCTTGTGAGAGCTCTATAGCTGAGAGTGGAGAGT 900

Db 841 GATGAGGAGCTTCCGATTAATCTTGTGAGAGCTCTATAGCTGAGAGTGGAGAGT 900

55 Qy 901 CGACTGCTAAAGAAAGTTAAGCGCTGGATATAGAGCTTGTGATCTTGGACTCAATAA 960

Db 901 CGACTGCTAAAGAAAGTTAAGCGCTGGATATAGAGCTTGTGATCTTGGACTCAATAA 960

60 Qy 961 AATGATTTAGCAATATGATTTCACTCAGAGTCAGAGCTTGGCAGGAAGCTGAGAGCC 1020

Db 961 AATGATTTAGCAATATGATTTCACTCAGAGTCAGAGCTTGGCAGGAAGCTGAGAGCC 1020

Qy 1021 CGCAGAGCTCGACTAAATCGCGAAATACAAAGATACCAAGTGGAGCTTCTATTAA 1080

65 Db 1021 CGCAGAGCTCGACTAAATCGCGAAATACAAAGATACCAAGTGGAGCTTCTATTAA 1080

Qy 1081 ACTTACTTGATCTGCTGAGCTAGCAAGAGAAATGCGACTATTCAGCATCATATTCTATT 1140

70 Db 1081 ACTTACTTGATCTGCTGAGCTAGCAAGAGAAATGCGACTATTCAGCATCATATTCTATT 1140

Qy 1141 GTTACTATAAAAATCATGTGATTAATGATTTACTTCTGTTTCTCTTTTGTGTTCTG 1200

Db 1141 GTTACTATAAAAATCATGTGATTAATGATTTACTTCTGTTTCTCTTTTGTGTTCTG 1200

75 Qy 1201 TTCTCTCTCTCTGACCGCTTGTAAATGTTTGGCGGAGACTCTTAAGTATATTTGA 1260

Db 1201 TTCTCTCTCTCTGACCGCTTGTAAATGTTTGGCGGAGACTCTTAAGTATATTTGA 1260

80 Qy 1261 GTTCTCTTTTCTACTAATCATGAGAAAGTCTTCTTTTGCATTAATTAATTAATTAACA 1320

Db 1261 GTTCTCTTTTCTACTAATCATGAGAAAGTCTTCTTTTGCATTAATTAATTAATTAACA 1320

Qy 1321 TGTCTTTACAGAGCTCTTCTGCTGATCTCCAGATGTTAAATTTACTTTCTGACGCCAA 1380

85 Db 1321 TGTCTTTACAGAGCTCTTCTGCTGATCTCCAGATGTTAAATTTACTTTCTGACGCCAA 1380

Qy 1381 TTGGAAATGCATATTGGATGAAAGAGAGTCTTCTGTTATTCAGAGAGCTAGATAT 1440

Db 1381 TTGGAAATGCATATTGGATGAAAGAGAGTCTTCTGTTATTCAGAGAGCTAGATAT 1440

90 Qy 1441 CCTTAAAGACTACTCTGCGATCTAATTACAGCCTTATTTTGTATGCTTTTGGCATT 1500

Db 1441 CCTTAAAGACTACTCTGCGATCTAATTACAGCCTTATTTTGTATGCTTTTGGCATT 1500

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5 Qy 1501 CTCTCTCTCTAGAAAAGTTCGAAATGTTTCTAAAGGTAAATGCGATTTGAAATCAA 1560  
 Db 1501 CTCTCTCTCTAGAAAAGTTCGAAATGTTTCTAAAGGTAAATGCGATTTGAAATCAA 1560

10 Qy 1561 TTTTCACTAGCCAAAGCGATCGAGCCAGGAGTGTCTTCAAGAAACACACCGAGA 1620  
 Db 1561 TTTTCACTAGCCAAAGCGATCGAGCCAGGAGTGTCTTCAAGAAACACACCGAGA 1620

15 Qy 1621 TGAATTAATTTTGAAGCTGTGGAAGGTAAATTAATAGAGCTTAAGAAAGAACATTTT 1680  
 Db 1621 TGAATTAATTTTGAAGCTGTGGAAGGTAAATTAATAGAGCTTAAGAAAGAACATTTT 1680

20 Qy 1681 GCGTGAATGGAAGCAGCACTGAAAGCGATGCGCCCTGCGGTGTTAATGATGCAATTCCT 1740  
 Db 1681 GCGTGAATGGAAGCAGCACTGAAAGCGATGCGCCCTGCGGTGTTAATGATGCAATTCCT 1740

25 Qy 1741 CTTTTCGCAATACATTTGATTTGTTTCATGAAATATTAATCAACATTGAGAGAAATGATT 1800  
 Db 1741 CTTTTCGCAATACATTTGATTTGTTTCATGAAATATTAATCAACATTGAGAGAAATGATT 1800

Qy 1801 ATAACTGAGACATCTGCTGTTTATCAGCATAGTTTGTGTAATTTGCTTCCTTTTAATAAA 1860  
 Db 1801 ATAACTGAGACATCTGCTGTTTATCAGCATAGTTTGTGTAATTTGCTTCCTTTTAATAAA 1860

Qy 1861 CCCATTGTTGAAAGTCAAAAAAAAAAAAAAAAAA 1893  
 Db 1861 CCCATTGTTGAAAGTCAAAAAAAAAAAAAAAAAA 1893.

30 De Robertis's SEQ ID NO: 10 encodes the amino acid sequence of SEQ ID NO: 9  
 and SEQ ID NO: 9 is the amino acid sequence of human frzb-1 (page 6, lines 29-31;  
 Figures 9 and 10). De Robertis's SEQ ID NO: 9 is identical to the present application's  
 SEQ ID NO: 9, as indicated below (Qy = the present application's SEQ ID NO: 9) (Db =  
 De Robertis's SEQ ID NO: 9):

35 AAW41254  
 ID AAW41254 standard; protein; 325 AA.  
 XX  
 AC AAW41254;  
 40 XX  
 DT 09-JUL-1998 (first entry)  
 XX  
 DE Human "frazzled" frzb-1.  
 XX  
 IN Growth factor; frazzled; frzb-1; Wnt antagonist; human;  
 45 IN tumour suppressor; cancer.  
 XX  
 OS Homo sapiens.  
 XX  
 PN M09746275-A1.  
 50 XX  
 PD 24-DEC-1997.  
 XX  
 PF 19-JUN-1997; 97MO-US010942.  
 XX  
 55 PR 20-JUN-1996; 96US-0020150P.  
 PR 18-JUN-1997; 97US-00878474.  
 XX  
 PA (RROC) UNIV CALIFORNIA.  
 XX  
 60 PI De Robertis EM, Bouwmeester T;  
 XX  
 DR WPI; 1998-063760/06.  
 DR N-PSDB; AAW41017.  
 XX  
 65 PT New isolated growth factors - with neurotrophic, growth or  
 PT differentiation factor activity, tumour growth suppressor activity or  
 PT mesoderm differentiation activity.  
 XX  
 70 PS Claim 6; Fig 9; 48pp; English.  
 XX  
 CC The present sequence is the human growth factor protein "frazzled" frzb-  
 CC 1. frzb-1 is an antagonist of Wnt in vivo, and thus is believed to find  
 CC utility as a tumour suppressor gene, since overexpressed Wnt proteins  
 CC cause cancer. Frzb-1 may also be a useful vehicle for solubilisation and

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CC therapeutic delivery of complexed Wnt proteins

XX

SQ Sequence 325 AA;

5 Query Match 100.0%; Score 1738; DB 3; Length 325;  
 Best Local Similarity 100.0%; Pred. Mo. 7.1e-166;  
 Matches 325; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

10 QY 1 MWCSFGWELLERGLLALALCLLEVPGARAAACEPVRIPLCKSLPDDTTGQVHLHS 60  
 DB 1 MWCSFGWELLERGLLALALCLLEVPGARAAACEPVRIPLCKSLPDDTTGQVHLHS 60

15 QY 61 TQAAALAIISQPEGLLOTHCSFLLPFLCANYAPICTIDFQSEPTIKPCISVCBARQCE 120  
 DB 61 TQAAALAIISQPEGLLOTHCSFLLPFLCANYAPICTIDFQSEPTIKPCISVCBARQCE 120

20 QY 121 PILIKYKESMPENLACEHLPVYDGVCTISPEAIVTADGADPFNDSSNCKRQASSERCK 180  
 DB 121 PILIKYKESMPENLACEHLPVYDGVCTISPEAIVTADGADPFNDSSNCKRQASSERCK 180

25 QY 181 KPIRATQKTYFDMYNTVIRAKVKEIKTKCEDVTAVVEVKEILKSSLVMIPTDTVLYTS 240  
 DB 181 KPIRATQKTYFDMYNTVIRAKVKEIKTKCEDVTAVVEVKEILKSSLVMIPTDTVLYTS 240

30 QY 241 SOCLCPPLAVNKEYIIMVYEDDSRLLLVDSIARNDKRLGKVKVKKDGLRLGLSK 300  
 DB 241 SOCLCPPLAVNKEYIIMVYEDDSRLLLVDSIARNDKRLGKVKVKKDGLRLGLSK 300

30 QY 301 SDSSNSDSTQSGKSGKSNMPQARN 325  
 DB 301 SDSSNSDSTQSGKSGKSNMPQARN 325.

De Robertis also discloses a complex comprising a substantially pure frzb-1 protein complexed with at least one Wnt protein (claim 12, page 26). Accordingly, De Robertis discloses a complex comprising a substantially pure frzb-1 protein comprising the amino acid sequence of SEQ ID NO: 9 complexed with at least one Wnt protein.

### Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

40 The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The present specification discloses that "substitutional, deletional, or insertional mutants of the novel polypeptides may be prepared by in vitro or recombinant methods and screened for immuno-crossreactivity with cerberus, frzb-1, or PAPC and for cerberus

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antagonist or agonist activity" (page 5, lines 31-35). Hence, it is unclear how to construe the term "frzb-1 protein" because it is unclear if "substitutional, deletional, or insertional mutants" are encompassed by the term "frzb-1 protein." The metes and bounds are not clearly set forth.

5

### Conclusion

No claims are allowable.

10

ANY INQUIRY CONCERNING THIS COMMUNICATION OR EARLIER COMMUNICATIONS FROM THE EXAMINER SHOULD BE DIRECTED TO DAVID S. ROMEO WHOSE TELEPHONE NUMBER IS (571) 272-0890. THE EXAMINER CAN NORMALLY BE REACHED ON MONDAY THROUGH FRIDAY FROM 7:30 A.M. TO 4:00 P.M. IF ATTEMPTS TO REACH THE EXAMINER BY TELEPHONE ARE UNSUCCESSFUL, THE EXAMINER'S SUPERVISOR, GARY KUNZ, CAN BE REACHED ON (571) 272-0887.

15

IF SUBMITTING OFFICIAL CORRESPONDENCE BY FAX, APPLICANTS ARE ENCOURAGED TO SUBMIT OFFICIAL CORRESPONDENCE TO THE FOLLOWING TC 1600 BEFORE AND AFTER FINAL RIGHTFAX NUMBERS:

BEFORE FINAL (703) 872-9306

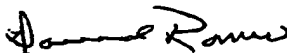
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CUSTOMERS ARE ALSO ADVISED TO USE CERTIFICATE OF FACSIMILE PROCEDURES WHEN SUBMITTING A REPLY TO A NON-FINAL OR FINAL OFFICE ACTION BY FACSIMILE (SEE 37 CFR 1.8 AND 1.8).

20

FAXED DRAFT OR INFORMAL COMMUNICATIONS SHOULD BE DIRECTED TO THE EXAMINER AT (571) 273-0890. ANY INQUIRY OF A GENERAL NATURE OR RELATING TO THE STATUS OF THIS APPLICATION OR PROCEEDING SHOULD BE DIRECTED TO THE GROUP RECEPTIONIST WHOSE TELEPHONE NUMBER IS (703) 308-0196.

25



DAVID ROMEO  
PRIMARY EXAMINER  
ART UNIT 1647

30

DSR  
MAY 26, 2004